

# Document made available under the Patent Cooperation Treaty (PCT)

International application number: PCT/US04/025299

International filing date: 05 August 2004 (05.08.2004)

Document type: Certified copy of priority document

Document details: Country/Office: US  
Number: 60/498,264  
Filing date: 26 August 2003 (26.08.2003)

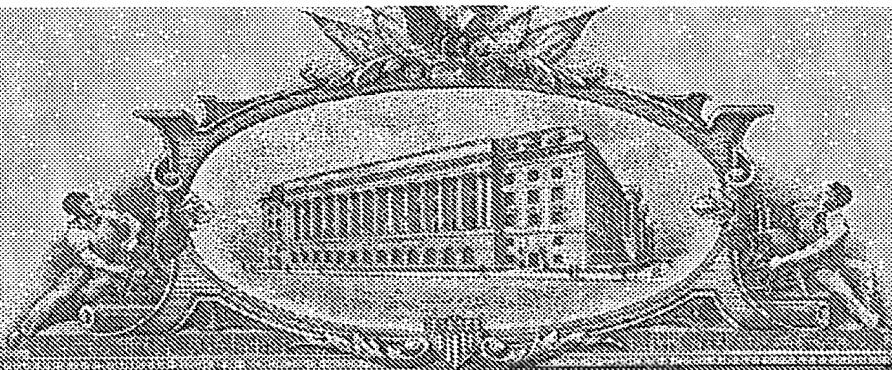
Date of receipt at the International Bureau: 10 September 2004 (10.09.2004)

Remark: Priority document submitted or transmitted to the International Bureau in compliance with Rule 17.1(a) or (b)

BEST AVAILABLE COPY



World Intellectual Property Organization (WIPO) - Geneva, Switzerland  
Organisation Mondiale de la Propriété Intellectuelle (OMPI) - Genève, Suisse



# THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS, SHALL COME;

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office

*August 31, 2004*

THIS IS TO CERTIFY THAT ANNEXED HERETO IS A TRUE COPY FROM THE RECORDS OF THE UNITED STATES PATENT AND TRADEMARK OFFICE OF THOSE PAPERS OF THE BELOW IDENTIFIED PATENT APPLICATION THAT MET THE REQUIREMENTS TO BE GRANTED A FILING DATE.

APPLICATION NUMBER: 60/498,264  
FILING DATE: *August 26, 2003*  
RELATED PCT APPLICATION NUMBER: *PCT/US04/25299*

Certified by



Jon W Dudas

Acting Under Secretary of Commerce  
for Intellectual Property  
and Acting Director of the U.S.  
Patent and Trademark Office

Please type a plus sign (+) inside this box → ☐

PTO/SB/16 (02-01)

Approved for use through 10/31/2002. OMB 0651-0032  
Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

## PROVISIONAL APPLICATION FOR PATENT COVER SHEET

This is a request for filing a PROVISIONAL APPLICATION FOR PATENT under 37 CFR 1.53 (c).

Express Mail Label No.

### INVENTOR(S)

Given Name (first and middle [if any])	Family Name or Surname	Residence (City and either State or Foreign Country)
Eric Richard Scott Joseph	May Duggan	Indianapolis, Indiana Indianapolis, Indiana

☐ Additional inventors are being named on the \_\_\_\_\_ separately numbered sheets attached hereto

### TITLE OF THE INVENTION (280 characters max)

VISUAL DISPLAY WALL MOUNTING DEVICE

### CORRESPONDENCE ADDRESS

Direct all correspondence to:

☐ Customer Number

Place Customer Number  
Bar Code Label here

OR

Type Customer Number here

☒ Firm or Individual Name  
JOSEPH S. TRIPOLI, THOMSON LICENSING INC.

Address  
PATENT OPERATIONS.

Address  
P. O. BOX 5312

City  
PRINCETON State  
NJ ZIP  
08543-5312

Country  
USA Telephone  
609-734-6834 Fax  
609-734-6888

### ENCLOSED APPLICATION PARTS (check all that apply)

☒ Specification Number of Pages  ☐ CD(s), Number

☒ Drawing(s) Number of Sheets  ☐ Other (specify)

☐ Application Data Sheet. See 37 CFR 1.76

### METHOD OF PAYMENT OF FILING FEES FOR THIS PROVISIONAL APPLICATION FOR PATENT (check one)

☐ Applicant claims small entity status. See 37 CFR 1.27.

☐ A check or money order is enclosed to cover the filing fees

☒ The Commissioner is hereby authorized to charge filing fees or credit any overpayment to Deposit Account Number:

FILING FEE  
AMOUNT (\$)

☐ Payment by credit card. Form PTO-2038 is attached.

The invention was made by an agency of the United States Government or under a contract with an agency of the United States Government.

☒ No.

☐ Yes, the name of the U.S. Government agency and the Government contract number are: \_\_\_\_\_

Respectfully submitted

SIGNATURE

*Patricia A. Verlangieri*

Date

TYPED or PRINTED NAME Patricia A. Verlangieri

REGISTRATION NO.  
(if appropriate)

Docket Number:

TELEPHONE 609 734-6867

## USE ONLY FOR FILING A PROVISIONAL APPLICATION FOR PATENT

This collection of information is required by 37 CFR 1.51. The information is used by the public to file (and by the PTO to process) a provisional application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 8 hours to complete, including gathering, preparing, and submitting the complete provisional application to the PTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, Washington, D.C., 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Box Provisional Application, Assistant Commissioner for Patents, Washington, D.C. 20231.

16235 U.S. PTO  
60/498264  
08/26/03

## **VISUAL DISPLAY WALL MOUNTING APPARATUS**

### **FIELD OF THE INVENTION**

The present invention is directed toward visual displays and in particular,  
 5 toward visual display wall mounting brackets.

### **BACKGROUND OF THE INVENTION**

The existing visual display wall mounting brackets on the market are  
 expensive, very heavy and cumbersome to use. They do not allow the customer to  
 10 mount a thin television display (or monitor) to the wall with less than about two (2)  
 inches of clearance between the unit and the wall.

Most, if not all, of the current wall mount bracketry require the customer to  
 make some sort of final adjustment to lock them together once the visual display  
 mount bracketry and the wall mount bracketry are joined. This locking feature must  
 15 be activated in order to keep the set from falling off the wall. Also, some wall  
 mounting bracketry is made of welded subassemblies which are complicated to build  
 and expensive. Additionally, some have multiple pieces that the customer is required  
 to subassemble to the correct size before assembling to the visual display (or  
 monitor).

### **SUMMARY OF THE INVENTION**

The present invention is a cost effective wall mounting apparatus for a visual  
 display. The wall mounting apparatus comprises two interlocking plates that are  
 configured to mount the visual display to a wall such that the bracketry provides a  
 25 gap between the wall and the visual display of less than about 2 inches. One of the  
 plates is designed to be attached to the wall, while the other is affixed to the back of  
 the visual display. The visual display is mounted to the wall by hooking the two plates  
 together, such that the two interlocking plates contact each other in at least two  
 places along the surfaces thereof.

### **BRIEF DESCRIPTION OF THE DRAWINGS**

The invention is hereinafter described in detail with reference to the  
 accompanying drawings, in which:

FIGS. 1A-1D depict cross-sectional views of one embodiment of the interlocking brackets of the present invention showing a visual display being mounted to a wall;

FIGS. 2A-2D depict cross-sectional views of an alternate embodiment of the interlocking brackets of the present invention showing the visual display being mounted to the wall;

FIGS. 3A-3D depict cross-sectional views of an alternate embodiment of the interlocking brackets of the present invention showing a visual display being mounted to a wall;

FIGS. 4A-4D depict cross-sectional views of an alternate embodiment of the interlocking brackets of the present invention showing a visual display being mounted to a wall;

FIGS. 5A-5D depict cross-sectional views of an alternate embodiment of the interlocking brackets of the present invention showing a visual display being mounted to a wall;

FIGS. 6A-6D depict cross-sectional views of an alternate embodiment of the interlocking brackets of the present invention showing a visual display being mounted to a wall;

FIGS. 7A-7D depict front, back and side views of the interlocked brackets of the present invention; and

FIG. 8 depicts an enlarged view of a portion of the interlocked brackets shown in FIG. 7B.

# DETAILED DESCRIPTION

The present invention is a cost effective wall mounting apparatus for a visual display. The wall mounting apparatus comprises two interlocking plates that are configured to mount the visual display to a wall such that the bracketry provides a gap between the wall and the visual display of less than about 2 inches. One of the plates is designed to be attached to the wall, while the other is affixed to the back of the visual display. The visual display is mounted to the wall by hooking the two plates together, such that the two interlocking plates contact each other in at least two places along the surfaces thereof.

The interlocking plates should be formed of a material, such as for example metal (steel, aluminum (Al)) or plastic, with sufficient strength to support a load of up to about 200 pounds without deforming. The interlocking plates may be made using any suitable process such as for example sheet metal forming, roll forming, die casting and extrusion, among others.

Referring to FIGS. 1A-1D, the interlocking plates may be made from two stamped sheet metal parts. One interlocking plate 2 is designed to be mounted to the back of the visual display (television) and the other interlocking plate 4 is designed to be mounted to the wall (FIG. 1A). Interlocking plate 2 includes a portion 8 which extends a fixed distance away from the back of the visual display, that in conjunction with a portion 7 of interlocking plate 4 that also extends a fixed distance away from the wall, defines an air gap between the display and the wall of less than about two-inches when interlocking plate 2 is attached to interlocking plate 4. The portions 7, 8 may have the same or different lengths. Interlocking plate 2 also includes a hooking portion 10 that contacts an area of a surface of the portion 7 of interlocking plate 4 when interlocking plate 2 is attached to interlocking plate 4 (FIG. 1D). Interlocking plate 4 also includes a hooking portion 9 that contacts an area of a surface of the portion 8 of interlocking plate 2 when interlocking plate 2 is attached to interlocking plate 4 (FIG. 1D).

To mount the visual display to the wall, interlocking plate 2 is positioned against interlocking plate 4 (FIG. 1B). Gradually releasing the weight of the visual display attached to interlocking plate 2 (FIG. 1C) and letting gravity take over seats interlocking plate 2 on interlocking plate 4 (FIG. 1D) holding the visual display a fixed distance from the wall. The visual display is mounted to the wall by hooking the two interlocking plates 2, 4 together, such that the two interlocking plates 2, 4 contact each other in at least two places along the surfaces thereof (e.g., in FIG. 1D hooking portion 10 of interlocking plate 2 contacts an area of the surface of portion 7 and hooking portion 9 contacts an area of the surface of portion 8). Generous entry clearances for the hooking portions 9, 10 make it easy to interlock the two plates 2, 4 together.

The interlocking plates 2, 4 allow the visual display to rotate until the bottom edge of the display hits the wall. This feature accommodates those who wish a small amount of down angle for their display. For those who wish to position the display

parallel to the wall, bumpers, approximately the same thickness as the space gap between the display and the wall may be placed between the visual display and the wall at or near the bottom of the display.

For the embodiment depicted in FIGS. 1A-1D, portion 7 of interlocking plate 4 is flat, extending perpendicularly away from the wall. Alternatively, interlocking plate 4 may include an angled portion extending away from the wall and a flat portion extending away from the angled portion (FIGS. 3A-3D). Interlocking plate 4 may also alternatively include a flat portion, an angled portion and a backstop portion (FIGS. 2A-2D).

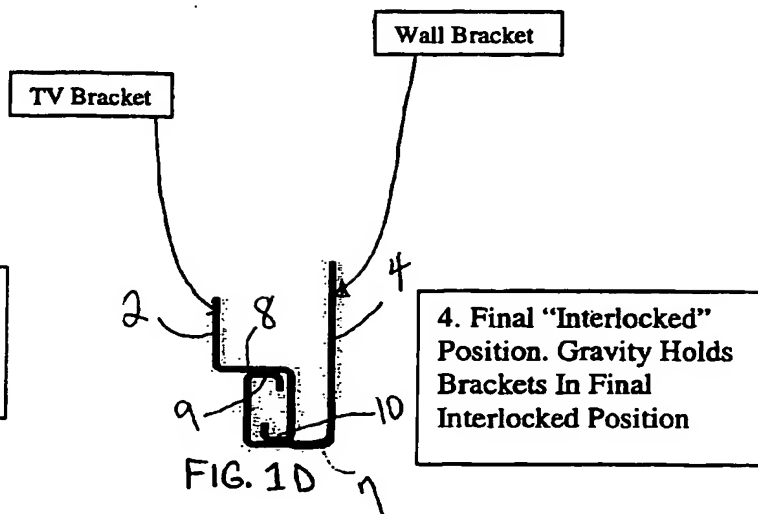
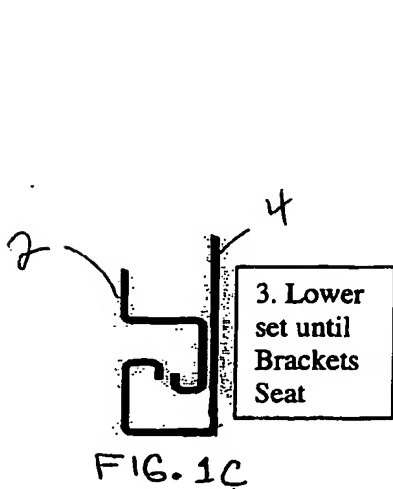
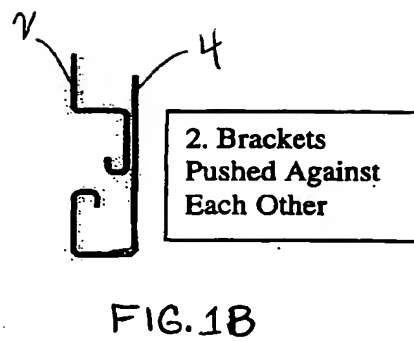
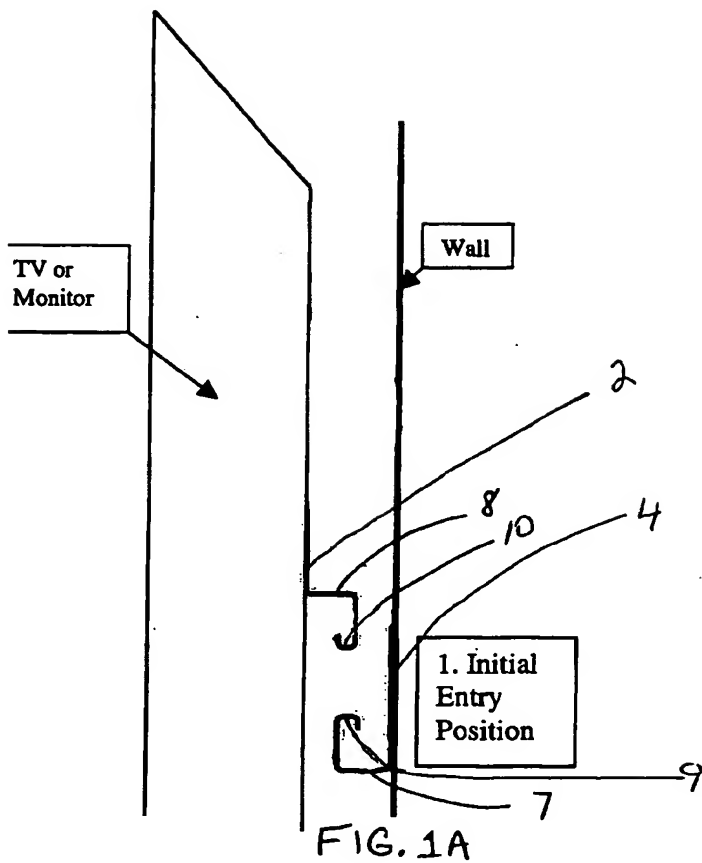
Referring to FIGS. 4A-4D, 5A-5D and 6A-6D, the interlocking plates 2, 4 may alternatively be configured to include elongate sections 15, 20, along which the plates 2, 4 may be further attached to the visual monitor and wall, respectively.

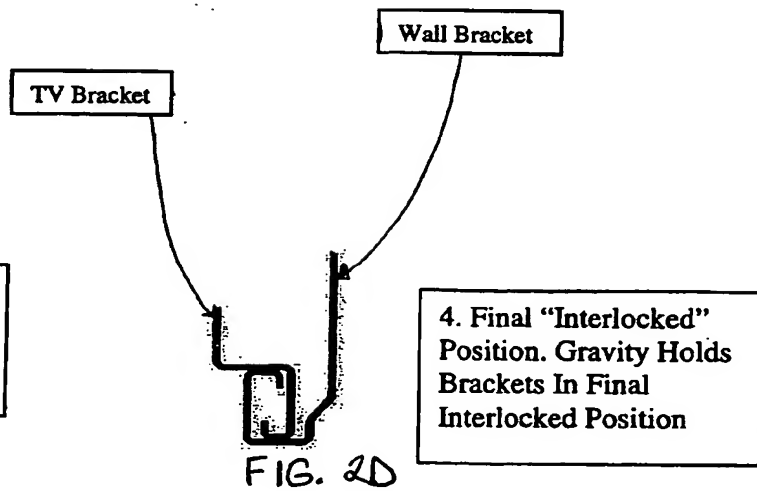
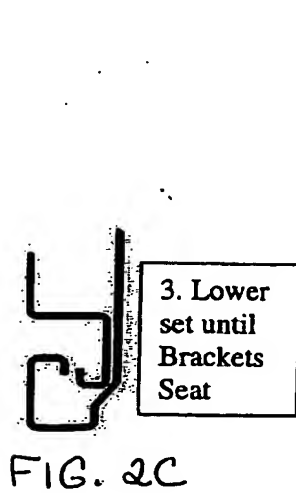
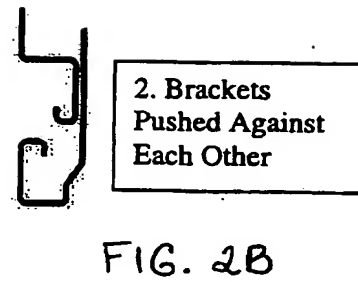
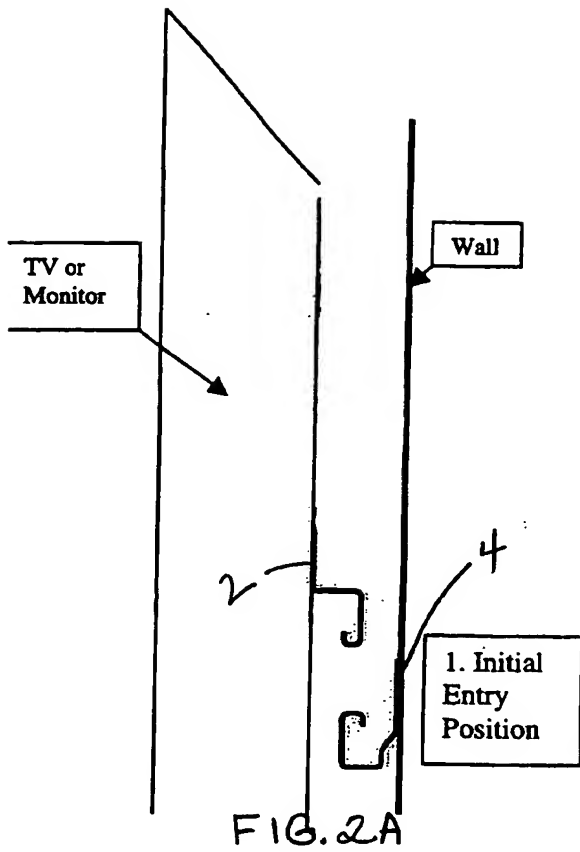
Referring to FIGS. 7A-7D, front, back and side views of interlocked plates are shown. As depicted plate 2 may be longer in length than plate 4 to permit side-to-side adjustment for the visual display. Additionally, referring to FIG. 8, end stops 30 on plate 2 prevent the visual display from sliding out of the bracket sideways.

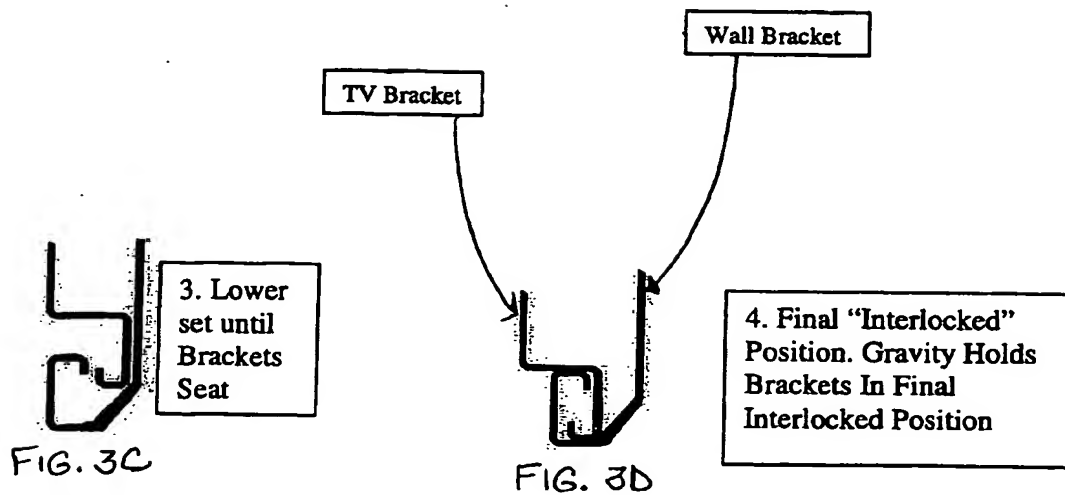
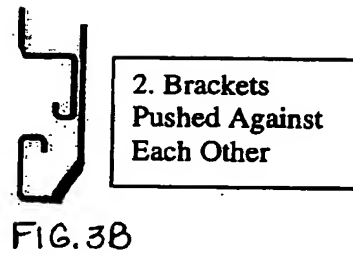
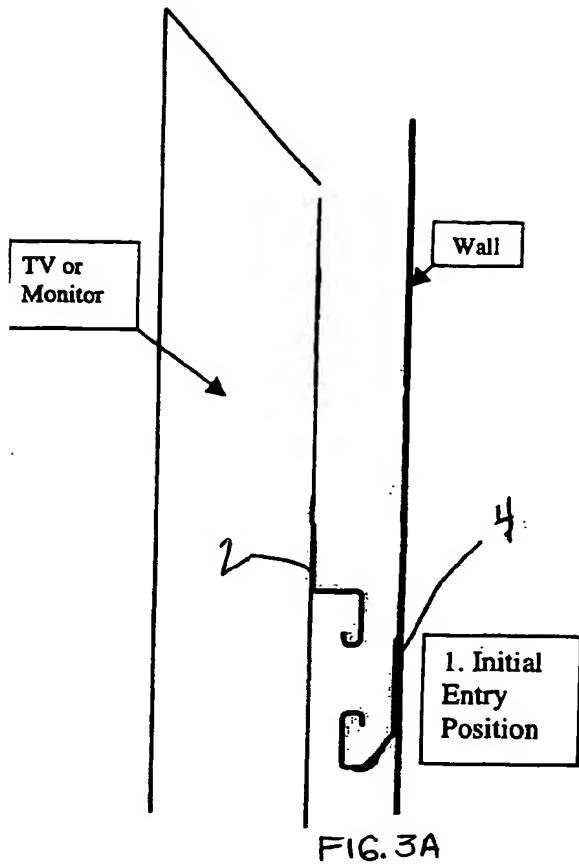
Further, while the depictions shown illustrate only one set of brackets being used to affix the visual display to the wall, it is contemplated that more than one set may also be used.

ABSTRACT

The present invention is a cost effective wall mounting apparatus for a visual display. The wall mounting apparatus comprises two interlocking plates that are  
5 configured to mount the visual display to a wall such that the bracketry provides a gap between the wall and the visual display of less than about 2 inches. One of the plates is designed to be attached to the wall, while the other is affixed to the back of the visual display. The visual display is mounted to the wall by hooking the two plates together, such that the two interlocking plates contact each other in at least two  
10 places along the surfaces thereof.







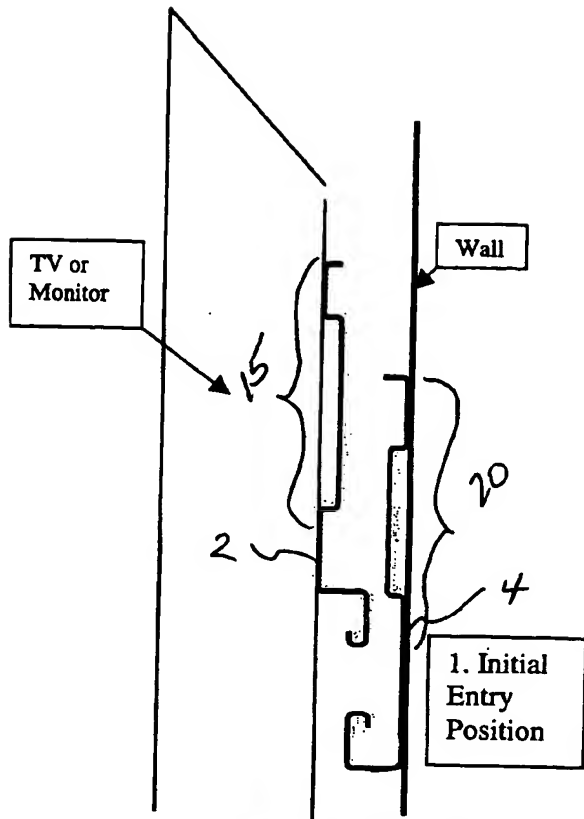


FIG. 4A

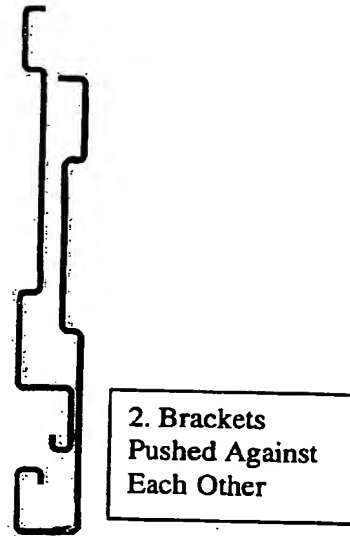


FIG. 4B

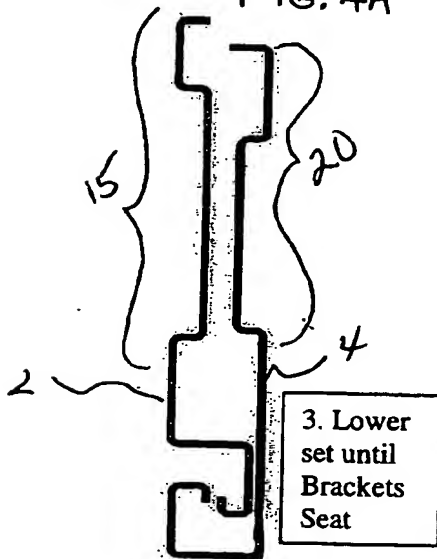


FIG. 4C

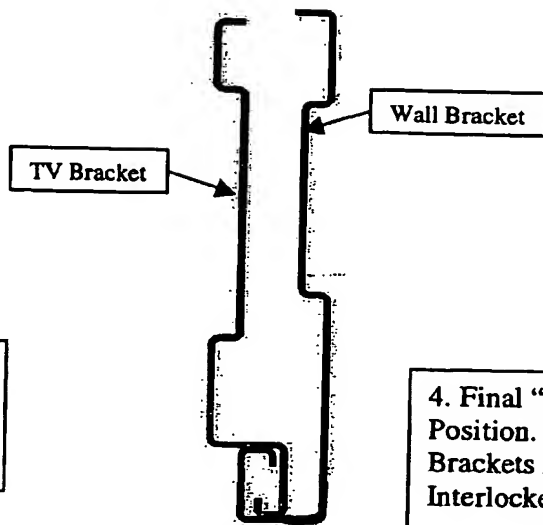
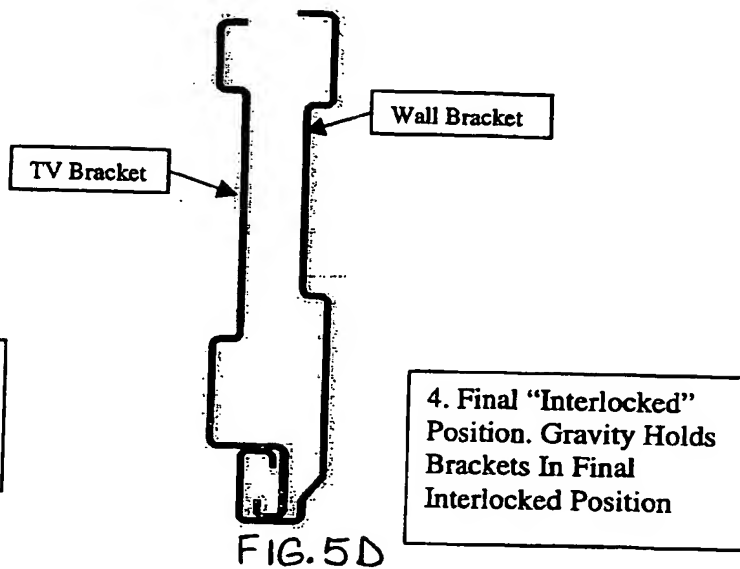
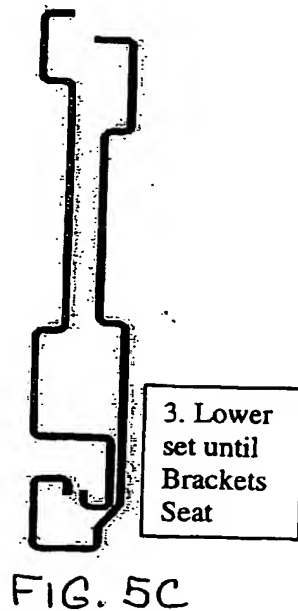
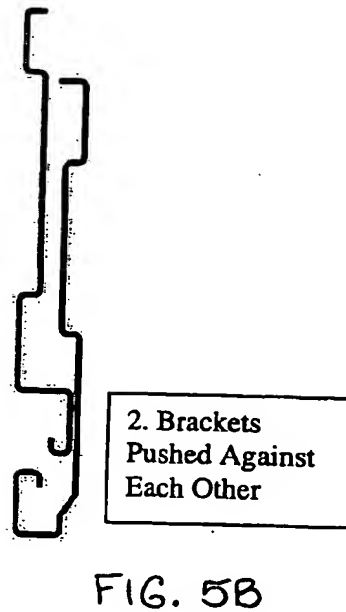
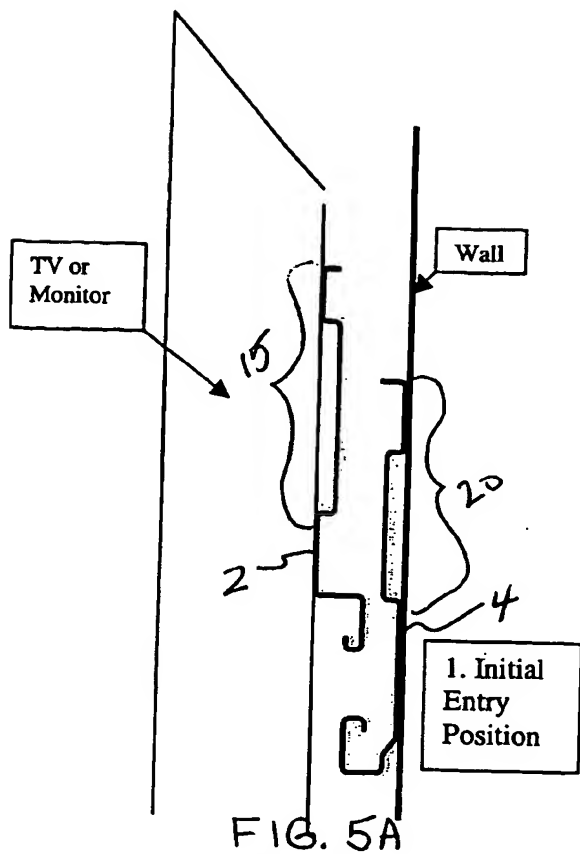


FIG. 4D



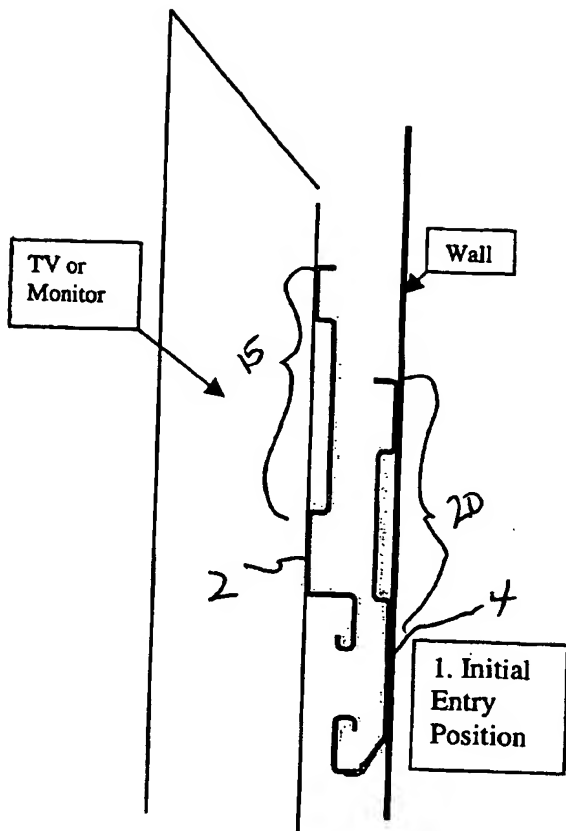


FIG. 6A

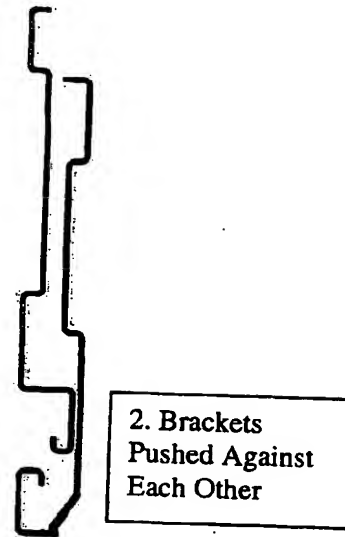


FIG. 6B

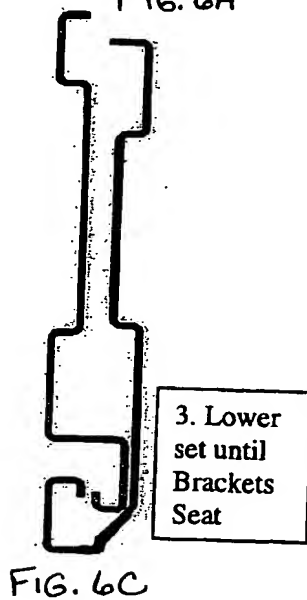


FIG. 6C

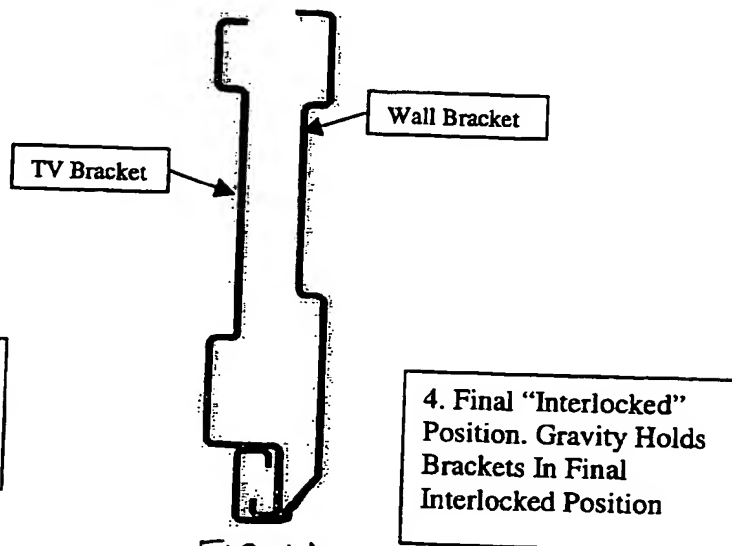


FIG. 6D

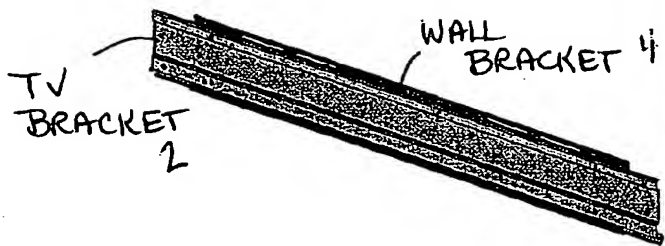


FIG. 7A

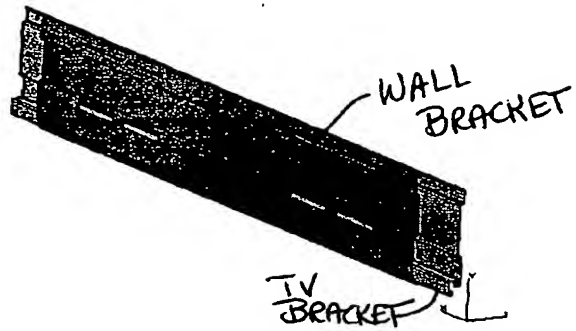


FIG. 7B



FIG. 7C

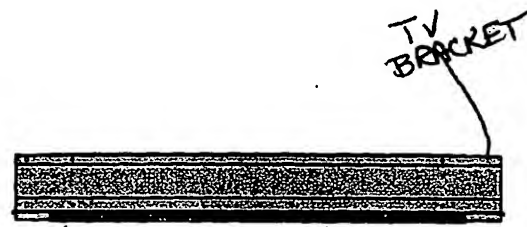


FIG. 7D

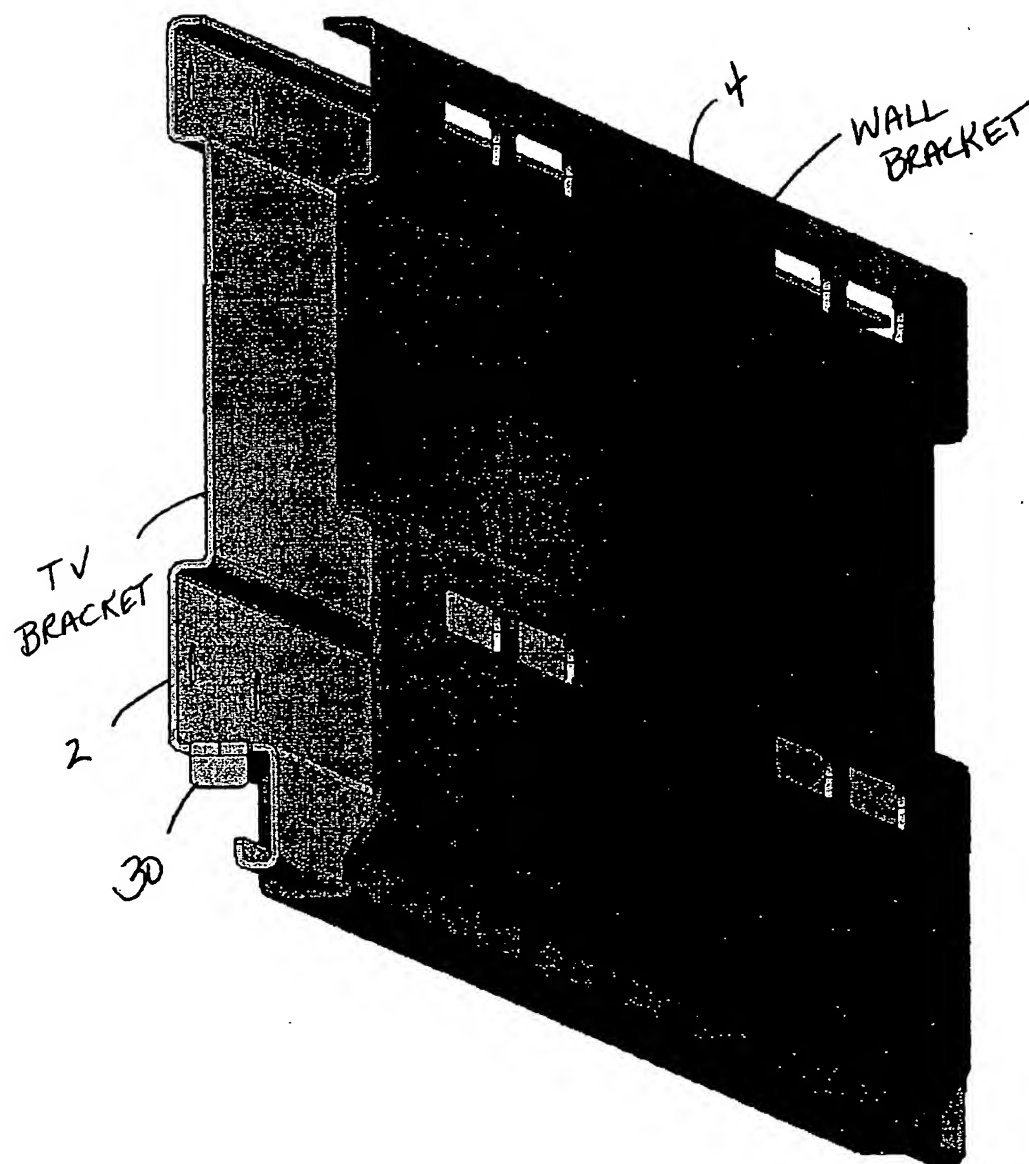


FIG. 8

**This Page is Inserted by IFW Indexing and Scanning  
Operations and is not part of the Official Record**

**BEST AVAILABLE IMAGES**

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- ☐ BLACK BORDERS
- ☐ IMAGE CUT OFF AT TOP, BOTTOM OR SIDES
- ☒ FADED TEXT OR DRAWING
- ☒ BLURRED OR ILLEGIBLE TEXT OR DRAWING
- ☐ SKEWED/SLANTED IMAGES
- ☐ COLOR OR BLACK AND WHITE PHOTOGRAPHS
- ☐ GRAY SCALE DOCUMENTS
- ☐ LINES OR MARKS ON ORIGINAL DOCUMENT
- ☒ REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY
- ☐ OTHER: \_\_\_\_\_

**IMAGES ARE BEST AVAILABLE COPY.**

**As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.**